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ATTACHMENT C

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OTE 81-1525

27 JUL 1981

**MEMORANDUM FOR:** [REDACTED]  
**Executive Officer/DDA**

**FROM:** [REDACTED]  
**Director of Training and Education**

**SUBJECT:** **FY 1984 Research & Development Program**

**REFERENCE:** **Your memorandum, dtd 2 July 1981**  
**(DD/A 81-1381)**

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1. Attached is the Office of Training submission for the DDS&T call for FY 1984 Research and Development (R&D) requirements.

2. This is a new requirement, although it presupposes revival of an ORD project, Video Disk Programming Technology for Training (ref: DDS&T - 5773-79, dtd 15 November 1979, DDA Problem #13), which this office withdrew in FY 1981.

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3. If you have any questions on this matter, please contact [REDACTED] Plans Group, black extension [REDACTED] green extension [REDACTED]

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**Attachment:**  
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I. Office and Problem Number: The Office of Training and Education (OTE) #1.

II. Title: Computer Assisted Language Instruction System.

III. Policy Basis:

1. The DDCI, Admiral B. R. Inman, in testifying before Congress on 15 July 1981, told a House subcommittee that the nation's intelligence apparatus has been severely affected by deepening shortages of personnel who are trained in foreign languages. The shortages are a severe problem for the Agency. The Agency's Language Development Committee in its annual report for FY 1980 noted that speaking capabilities in the ten principal languages (French, Spanish, German, Russian, Chinese, Italian, Portuguese, Japanese, Arabic and Greek) which represent 80 percent of total Agency language skills showed a gross decline of 16 percent over the past five years (1975-80). Thirty-nine "lesser" languages suffered a gross 3 percent loss. Since 1966, professional level speaking skills declined 28 percent, and this trend will continue as senior operations officers with professional level speaking skills in second and third languages continue to retire. ☐

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2. In July 1980, The National Academy of Public Administration (NAPA) was contracted by the Agency to review its Language Incentive Program. In part, they said in their report: "It became evident to the NAPA Team early in its review that the Language Incentive Program is one aspect of an overall program needed to identify language requirements and to employ, develop and utilize resources to meet those requirements." Their report, therefore, focused on all aspects of a total language program. Given the sad state of language training in secondary schools and colleges within the U.S., a fact repeatedly lamented by the President's Commission on Foreign Language and International Studies in their report Strength Through Wisdom - A Critique of US Capability (November 19, 1979), the NAPA Team concluded that: "Training may be the most important and effective means by which the Agency can meet its most pressing needs and begin the long process of developing its foreign Language capabilities." ☐

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3. Admiral Inman, in his testimony on the Hill, 15 July 1981, called for "decisive action" in reversing the trend. Language currently has very high visibility within the Agency and will continue to have it for the foreseeable future. The dearth of language skills is a problem that has the attention of Agency officials at the highest levels. Some indication of this, aside from Admiral Inman's testimony, is the fact that the Language School instructor staff will be augmented 25 percent during FY 1983 and that the Office of Training and Education (OTE) and the Language School are being called upon increasingly to propose imaginative ways to help alleviate the problem. ☐

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**SECRET****V. Customer:**

7. Point-of-contact will be  of the OTE Plans Group, Black, extension  or Green, extension

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**VI. Problem Description:**

8. The Language School wishes to exploit as fully as possible computer assisted instruction technology in language teaching. This includes both software and hardware, as a system, not something piecemeal and ad hoc. The software must be imaginative, sophisticated, flexible and easy to use (user friendly), preferably tailored to unique Agency and Language School requirements. It must have the potential for growth and increased sophistication. In the area of hardware, the Language School is aware of video disk technology and would like to exploit its potential. The CAI should be available on VM (a classified system) as well as OTE's PDP 11 (an unclassified system). On VM the part-time student would have access to the system from his office or Data Access Centers (DACs). On the PDP, the student (full-time or part-time) would have access from home through portable terminals with modem units. The instructional material should seem essentially the same whether on VM or the PDP. In addition, CRTs capable of reproducing video pictures would be required for at least the portion of the system housed in the Chamber of Commerce Building. It is envisioned that video disks driven by microprocessors will be an integral part of the system.

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9. At first the system should be able to handle the more common scripts (particularly alphabetic). In time, Arabic, and ideographic scripts (Chinese and Japanese) will be necessary. (In FY 1980, 79.1 percent of Language School enrollment was in French, Russian, Spanish, German and Chinese in that order). The system, once fully developed, will support not only full- and part-time instruction but self-instruction as well. It will handle various kinds of testing such as diagnostic and achievement, although interactive reading proficiency testing should not be ignored. The system will have administrative/record keeping functions and may result in the generation of certain kinds of administrative or diagnostic reports. There may be research applications that should be considered.

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10. Many issues that are not identified here will have to be identified and addressed as planning gets underway. Equipment configuration is an obvious one. Instructor interaction with the system (including some clearance problems) and input and testing of materials is another.

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**SECRET****VII. Background for Support Activities:**

11. Much work is being done in the area of computer assisted instruction outside the Agency even in the area of language instruction. The PLATO system of the Control Data Corporation is a prime example. The University of Minnesota has developed the Minnesota Instructional Language (MIL) and is another. Neither are ideal for Agency applications but represent significant improvement over present capabilities. ☐ 25X1

12. In addition to VM and the PDP, it may be necessary to consider microcomputers (stand-alone or networked), minicomputers, modified word processors, such as the Wang Ideographic Word Processor which can produce Chinese (standard and simplified) and Japanese material. It may not be possible to have everything on one system (aside from the problem of the classified VM versus the unclassified PDP 11). Physical location of the proposed system, including those portions having video capability, may dictate more than one kind of hardware system. So far, specific access locations will include the Language Laboratory (CofC), the Language Loft (Headquarters), the CIA Self-Study Center (Headquarters), the Testing Room (401 CofC), and an Instructor Access Center (CofC). It may be that access to the PDP can be made from safe sites where NOC training is done, or, in this case, stand-alone portable units with unclassified software may be needed. ☐ 25X1

13. An important part of identifying the developmental work required will of course include a survey of existing software and hardware and of developments underway. However, it is envisioned that both of these areas will require substantial R&D effort in behalf of the Agency. ☐ 25X1

14. A full-blown system cannot be developed all at once if only because the Language School could not absorb it. A carefully thought out plan needs to be written identifying the stages of development and yet allowing the flexibility necessary to take as much advantage as possible of breakthroughs that will occur. ☐ 25X1

15. The system will be expensive and will take a number of years to develop and implement. ☐ 25X1

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**SECRET****VIII. Time Requirement**

16. The solution to the problem is not possible in the near-term, but work should begin as soon as possible both to experiment and to gather information for planning purposes. Some experimental activity is already underway within OTE. The sooner such a system can be implemented the better, but that requirement must be balanced against the capability of the Language School to implement the system, train the users and to develop and adapt instructional materials for use in it. The Office of Training and Education has identified this area as a capital investment area resulting in future savings in the Cost Reduction and Efficiency (CORE) exercise now underway within the DDA. Contracting should commence not later than FY 1984. ☐

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**IX. References:**

17. The Report of the Language Development Committee for FY 1980.

18. Final Report of the National Academy of Public Administration Team Reviewing the CIA Language Incentive Program (19 September 1980).

19. The report of the President's Commission on Foreign Language and International Studies entitled Strength Through Wisdom - A Critique of US Capability (November 19, 1979).

20. DDS&T Memorandum, Subject: FY-82 RD&E Program, dtd 15 Nov 79 (DDS&T - 5773-79), ref. Problem Statement DDA #13. ☐

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**X. Ranking:**

21. The ranking is identical to the office problem number. ☐

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